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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,368	06/26/2001	Tomi Heinonen	4925-92	2406

7590 12/16/2004

COHEN, PONTANI, LIEBERMAN & PAVANE
Suite 1210
551 Fifth Avenue
New York, NY 10176

EXAMINER

BUI, BING Q

ART UNIT	PAPER NUMBER
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2642

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/891,368

Applicant(s)

HEINONEN ET AL.

Examiner

Bing Q Bui

Art Unit

2642

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-65 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-26, 32-47 and 51-65 is/are allowed.
- 6) ☒ Claim(s) 27, 28, 30, 31, 48 and 49 is/are rejected.
- 7) ☐ Claim(s) 29 and 50 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/26/01; 8/02/01 and 8/22/01 _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-65 are pending in the application for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 27-28, 30-31 and 48-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stiller et al (US Pat No. 6,704,283) in view of Ruffini (US Pat No. 6,711,411), herein after referred as Stiller.

Regarding claim 27, referring to Figures 1-4, Stiller teaches a method of routing information while maintaining configuration of a wireless RF network, the network

comprising a plurality of network nodes (e.g., nodes A-H) for communicating with other nodes, each respective node having a controller unit (e.g., CPU 16), a data store and a unique identifier (e.g., memory 14 and address corresponding to each node shown in Fig. 4), the method comprising the steps of:

a) sending a current data load information and a hops-to-host count from each respective node of the wireless RF network to other nodes within the coverage area of said respective node of the wireless RF network (see col. 2, Ins 21-56);

b) periodically refreshing (updating) the data store of the each respective node of the wireless RF network with the data load information and the hops-to-host count of other nodes within the coverage area of said respective node of the wireless RF network (see col. 10, Ins 27-67);

c) selecting at least one path having least hops-to-host count for routing messages from a node to at least one control node of the wireless RF network; and d) if more than one path having least hops-to-host count exists, selecting from among them a path with least load for routing messages from the node to the at least one control node of the wireless RF network (see col. 2, Ins 57-65).

The step of sending a current data load information and a hops-to-host count from each respective node of the wireless RF network to other nodes taught by Stiller is not performed periodically. However, Ruffini teaches a method of sending a current data load information and a hops-to-host count from each respective node of the wireless RF network to other nodes is performed periodically (see col. 14, Ins 5-17). Therefore, integrating Ruffini's teachings into small wireless communication system of Stiller would

have been obvious for managing data or status corresponding to the plurality of nodes within the system over time.

Regarding claim 28, referring to Figures 1-4, Stiller teaches the method of claim 27, wherein each node removes from its data store information pertaining to a node that does not report current load for a predetermined time, whereby a node that becomes non-functional is removed from the network configuration (see col. 10, ln 64-col. 11, ln 3).

Regarding claims 30-31, referring to Figures 1-4, Stiller teaches the wireless network is a small wireless data network (a short range RF network / Bluetooth network) (see Abstract).

As to claims 48-49, they are rejected for the same reasons set forth to rejecting claims 27-28 above, since claims 48-49 are merely a system for implementing the method defined in the method claims 27-28, respectively.

Allowable Subject Matter

4. Claims 1-26, 32-47 and 51-65 allowed.
5. Claims 29 and 50 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art in general:

U.S. Pat. No. 5,812,531

U.S. Pat. No. 6,744,740

U.S. Pat. No. 6,792,323

U.S. Pat. No. 6,795,688

U.S. Pat. No. 6,829,222

U.S. Pat. No. 6,829,481

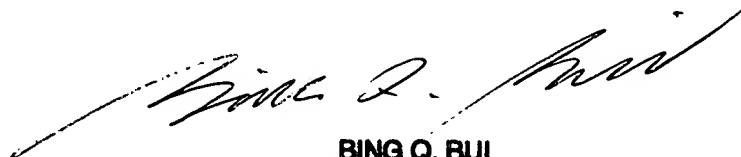
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bing Bui whose telephone number is (703) 308-5858. The examiner can normally be reached on Monday through Thursday from 7:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar, can be reached on (703) 305-4731. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 and for formal communications intended for entry (please label the response ☐EXPEDITED PROCEDURE☐) or for informal or draft communications not intended for entry (please label the response "PROPOSED" or "DRAFT").

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

11 DEC 2004

A handwritten signature in black ink, appearing to read "Bing Q. Bui", written in a cursive style.

**BING Q. BUI
PRIMARY EXAMINER**